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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,542	11/15/2001	Avi J. Ashkenazi	P2730PIC26	7269
28457	7590	03/09/2004	EXAMINER	
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			LANDSMAN, ROBERT S	
			ART UNIT	PAPER NUMBER

1647

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/997,542	GENENTECH, INC.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Robert Landsman	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 119-124 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 119-124 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/24/02</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Sequence Comparisons A-C</u> .        |

## **DETAILED ACTION**

### ***1. Formal Matters***

- A. The Preliminary Amendment dated 11/15/01, has been entered into the record.
- B. The Preliminary Amendment dated 9/3/02, has been entered into the record.
- C. Claims 119-124 are pending and are the subject of this Office Action.

### ***2. Priority***

According to the priority statement of 9/3/02, it appears that the claimed subject matter defined in the instant application is supported by the parent application serial no. 60/096,950. However, the Examiner has concluded that the subject matter defined in this application is not supported by any of the applications in the chain of priority because the presently claimed subject matter is not supported by a specific, substantial or well-established utility, nor, for this reason, is it enabled. Accordingly, the subject matter defined in claims 119-124 has an effective filing date of 11/15/01, which is the filing date of the present application.

Should the applicant disagree with the examiner's factual determination above, it is incumbent upon the applicant to provide the serial number and specific page number(s) of any parent application filed prior to 11/15/01 which specifically supports the particular claim limitation for each and every claim limitation in all the pending claims which applicant considers to have been in possession of and fully enabled for prior to 11/15/01.

### ***3. Information Disclosure Statement***

- A. References A1 and A2 have been lined through since they are not in proper format, including author and date of deposit.

### ***4. Specification***

- A. Though none could be found, due to the length of the specification, Applicants are reminded that embedded hyperlink and/or other form of browser-executable code are not permitted in the specification. See MPEP § 608.01.

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B. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title recites polypeptides and polynucleotides whereas the claims are drawn to antibodies.

### **5. Claim Objections**

A. The syntax of claims 119 and 124 could be improved by replacing the phrase “shown in Figure 233 (SEQ ID NO:326)” with “of SEQ ID NO:326.”

### **6. Claim Rejections - 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

A. Claims 119-124 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by a specific, substantial and credible asserted utility or a well established utility. These claims are directed to antibodies which bind to the protein of SEQ ID NO:326. However, the invention encompassed by these claims has no apparent or disclosed patentable utility. This rejection is consistent with the current utility guidelines, published 1/5/01, 66 FR 1092. The instant application has provided a description of an isolated protein. However, the instant application does not disclose a specific and substantial biological role of this protein or its significance.

However, it is clear from the instant specification that the claimed antibody which binds to what is termed an “orphan receptor” in the art. The instant application does not disclose the biological role of the claimed protein or its significance. Applicants disclose in the specification that the receptor is a secreted protein. However, this fact, alone, is insufficient to confer utility to the protein of the present invention. Therefore, the instant claims are drawn to an antibody to a protein which has a yet undetermined function or biological significance. There is no actual and specific significance which can be attributed to said protein identified in the specification. For this reason, the instant invention is incomplete. In the absence of a knowledge of the natural ligands or biological significance of this protein, there is no immediately obvious patentable use for it, or for the antibody. To employ a protein or antibody of the instant invention in the identification of substances which bind to and/or mediate activity of the said receptor is clearly to use it as the object of further research which has been determined by the courts to be a non-patentable utility. Since the instant specification does not disclose a “real-world” use for said

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protein then the claimed invention is incomplete and, therefore, does not meet the requirements of 35 U.S.C. 101 as being useful.

**Furthermore, since the protein of the invention is not supported by a specific and substantial asserted utility or a well established utility, the claimed antibodies also lack utility.**

***7. Claim Rejections - 35 USC § 112, first paragraph - enablement***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

A. Claims 119-124 are rejected under 35 U.S.C. 112, first paragraph, as failing to adequately teach how to use the instant invention. Specifically, since the claimed invention is not supported by a specific, substantial and credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

***8. Claim Rejections - 35 USC § 112, second paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A. Claim 122 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not understood how an antibody can be both an "antibody" and a "fragment." The phrase "an antibody, or fragment thereof," for example, could be used in independent claim 119 and claim 122 could be cancelled.

B. Claim 124 is confusing since it is not clear what the definition of "specifically binds" is. This term is not defined in the specification. Furthermore, it is not clear how this claim differs from that of claim 119, where the antibody "binds" the protein of SEQ ID NO:315.

*Handwritten initials and date:*  
AL  
3/5/14

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**9. Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

A. Claims 119-124 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker et al. (WO 99/63088). The claims recite an antibody which binds to the protein of SEQ ID NO:326. The claims also recite a monoclonal, polyclonal, humanized, or labeled antibody. Baker et al. teach a protein which is 100% identical to SEQ ID NO:326 of the present invention (Sequence Comparison A). Baker also teach monoclonal, polyclonal, humanized, labeled antibodies and antibody fragments (page 309, lines 16-21; page 311, line 28 – page 313, line 6 and page 365, line 16 – page 368, line 37).

B. Claims 119-124 are rejected under 35 U.S.C. 102(a) as being anticipated by Tang et al. (WO 01/53312). The claims recite an antibody which binds to the protein of SEQ ID NO:326. The claims also recite a monoclonal, polyclonal, humanized, or labeled antibody. Tang et al. teach a protein which has numerous areas of 6 or more contiguous amino acids of SEQ ID NO:326 of the present invention (Sequence Comparison B). Tang also teach monoclonal, polyclonal, humanized and labeled antibodies as well as fragments thereof (pages 74-83).

**10. Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. Claims 119-124 are rejected under 35 U.S.C. 103(a) as being anticipated by Weimann et al. in view of Baker et al. (WO 99/63088). The teachings of Weimann et al. and Baker et al. are seen in the

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above rejection under 35 USC 102. Weimann et al. teach a protein which is 100% identical to approximately 522 contiguous amino acids of SEQ ID NO:326 of the present invention (Sequence Comparison C). Weimann do not specifically teach any of the antibodies claimed by the present invention. However, Baker do teach monoclonal, polyclonal, humanized, labeled antibodies and antibody fragments (page 309, lines 16-21; page 311, line 28 – page 313, line 6 and page 365, line 16 – page 368, line 37). The artisan would have been motivated to make these antibodies in order to produce an antibody to isolate the protein (polyclonal), to a specific epitope of the protein of Weimann (monoclonal), or for detecting the protein (labeling) or any type of use involving humans, or the human variants of the protein of Weimann (humanized).

B. Claims 119-124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weimann et al. (Genome Research) in view of Tang. The teachings of Tang are seen in the above rejection under 35 USC 102. Weimann et al. teach a protein which is 100% identical to approximately 522 contiguous amino acids of SEQ ID NO:326 of the present invention (Sequence Comparison C). Weimann do not specifically teach any of the antibodies claimed by the present invention. However, Tang do teach these antibodies. It would have been obvious for one of ordinary skill in the art at the time of the present invention to have made polyclonal, monoclonal, labeled or humanized antibodies in view of the teachings of Tang since the procedures for producing an antibody to the protein of Weimann is identical to those to produce the antibody of Tang. The artisan would have been motivated to make these antibodies in order to produce an antibody to isolate the protein (polyclonal), to a specific epitope of the protein of Weimann (monoclonal), or for detecting the protein (labeling) or any type of use involving humans, or the human variants of the protein of Weimann (humanized).

## ***11. Conclusion***

A. No claim is allowable.

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***Advisory information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Landsman whose telephone number is (703) 306-3407. The examiner can normally be reached on Monday - Friday from 8:00 AM to 5:00 PM (Eastern time) and alternate Fridays from 8:00 AM to 5:00 PM (Eastern time).

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Gary Kunz, can be reached on (703) 308-4623.

Official papers filed by fax should be directed to (703) 308-4242. Fax draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Robert Landsman, Ph.D.  
Patent Examiner  
Group 1600  
March 03, 2004

  
ROBERT LANDSMAN  
PATENT EXAMINER



# Sequence Comparison A

ID AAY66729 standard; protein; 775 AA.  
 XX  
 AC AAY66729;  
 XX  
 DT 05-APR-2000 (first entry)  
 XX  
 DE Membrane-bound protein PRO1281.  
 XX  
 KW Membrane-bound polypeptide; PRO polypeptide; LDL receptor; TIE ligand;  
 KW pharmaceutical; receptor immunoadhesin; gene mapping.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO9963088-A2.  
 XX  
 PD 09-DEC-1999.  
 XX  
 PF 02-JUN-1999; 99WO-US12252.  
 XX  
 PR 02-JUN-1998; 98US-0087607.  
 XX  
 PA (GETH ) GENENTECH INC.  
 XX  
 PI Baker K, Chen J, Goddard A, Gurney AL, Smith V, Watanabe CK;  
 PI Wood WI, Yuan J;  
 XX  
 DR WPI; 2000-072883/06.  
 DR N-PSDB; AAZ65074.  
 XX  
 PT Membrane-bound proteins and related nucleotide sequences -  
 XX  
 PS claim 12; Fig 233; 822pp; English.  
 XX  
 CC The invention provides membrane-bound PRO polypeptides and  
 CC polynucleotides encoding them. The PRO sequences of the invention were  
 CC identified based on extracellular domain homology screening. The PRO  
 CC sequences have homology with proteins including LDL receptors, TIE  
 CC ligands and various enzymes. The membrane-bound proteins and receptor  
 CC molecules are useful as pharmaceutical and diagnostic agents. Receptor  
 CC immunoadhesins, for instance, can be used as therapeutic agents to block  
 CC receptor-ligand interactions. The membrane-bound proteins can also be  
 CC employed for screening of potential peptide or small molecule inhibitors  
 CC of the relevant receptor/ligand interaction. The PRO encoding sequences  
 CC are useful as hybridization probes, in chromosome and gene mapping and in  
 CC the generation of antisense RNA and DNA. PRO nucleic acid sequences  
 CC will also be useful for the preparation of PRO polypeptides, especially  
 CC by recombinant techniques.  
 XX  
 SQ Sequence 775 AA;

Query Match 100.0%; Score 4074; DB 21; Length 775;  
 Best Local Similarity 100.0%; Pred. No. 0;  
 Matches 775; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MRASLLSVLRPAGPVAVGISLGFTLSLLSVTWVEEPCGPGPPQPGDSELPPRGNTNAAR 60  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 1 MRASLLSVLRPAGPVAVGISLGFTLSLLSVTWVEEPCGPGPPQPGDSELPPRGNTNAAR 60  
 QY 61 RPNSVQPGAEREKPGAGEGAGENWEPRVLPYHPAQPGQAACKAVRTRYISTELGIRQLL 120  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 61 RPNSVQPGAEREKPGAGEGAGENWEPRVLPYHPAQPGQAACKAVRTRYISTELGIRQLL 120

Qy	121	VAVLTSQTTLPTLGVAVNRTLGHRLERVVFLTGARGRRAPPGMAVVTLGEERPIGHHLHLA	180
Db	121	VAVLTSQTTLPTLGVAVNRTLGHRLERVVFLTGARGRRAPPGMAVVTLGEERPIGHHLHLA	180
Qy	181	LRHLLEQHGDDFDWFFLVPDTTYTEAHGLARLTGHLSLASAAHLYLGRPQDFIGGEPTPG	240
Db	181	LRHLLEQHGDDFDWFFLVPDTTYTEAHGLARLTGHLSLASAAHLYLGRPQDFIGGEPTPG	240
Qy	241	RYCHGGFGVLLSRMLLQQLRPHLEGCRNDIVSARPDEWLGRCILDATGVGCTGDHEGVHY	300
Db	241	RYCHGGFGVLLSRMLLQQLRPHLEGCRNDIVSARPDEWLGRCILDATGVGCTGDHEGVHY	300
Qy	301	SHLELSPGEPVQEGDPHFRSALTAHPVRDPVHMYQLHKAFARAEELERTYQEIQELQWEIQ	360
Db	301	SHLELSPGEPVQEGDPHFRSALTAHPVRDPVHMYQLHKAFARAEELERTYQEIQELQWEIQ	360
Qy	361	NTSHLAVDGDRAAAWPVGI PAPS RPASRFEVLRWDYFTEQHAFSCADGSPRCPLRGADRA	420
Db	361	NTSHLAVDGDRAAAWPVGI PAPS RPASRFEVLRWDYFTEQHAFSCADGSPRCPLRGADRA	420
Qy	421	DVADVLGTALEELNRRYHPALRLQKQQLVNGYRRFDPARGMEYTLDLQLEALT PQGGRRP	480
Db	421	DVADVLGTALEELNRRYHPALRLQKQQLVNGYRRFDPARGMEYTLDLQLEALT PQGGRRP	480
Qy	481	LTRRVQLLRPLSRVEILPVPYVTEASRLTVLLPLAAAERDLAPGFLEAFATAALEPGDAA	540
Db	481	LTRRVQLLRPLSRVEILPVPYVTEASRLTVLLPLAAAERDLAPGFLEAFATAALEPGDAA	540
Qy	541	AALTLLLLLYEPRQAQRVAHADVFAPVKAHVAELERRFPGARVPWLSVQTAAPSPLRLMDL	600
Db	541	AALTLLLLLYEPRQAQRVAHADVFAPVKAHVAELERRFPGARVPWLSVQTAAPSPLRLMDL	600
Qy	601	LSKKHPLDTLFLLAGPDTVLT P DFLNRCRMHAISGWQAFFPMHFQAFHGPVAPPQGP GPP	660
Db	601	LSKKHPLDTLFLLAGPDTVLT P DFLNRCRMHAISGWQAFFPMHFQAFHGPVAPPQGP GPP	660
Qy	661	ELGRDTGRFDRQAASEACFYNSDYVAARGRLAAASEQEEELLES LDVYELFLHFSSLHVL	720
Db	661	ELGRDTGRFDRQAASEACFYNSDYVAARGRLAAASEQEEELLES LDVYELFLHFSSLHVL	720
Qy	721	RAVEPALLQRYRAQTCSARLSEDL YHRC LQSVLEGLGSRTQLAMLLFEQE QGNST	775
Db	721	RAVEPALLQRYRAQTCSARLSEDL YHRC LQSVLEGLGSRTQLAMLLFEQE QGNST	775

## Sequence Comparison B

ID AAM39781 standard; Protein; 772 AA.  
XX  
AC AAM39781;  
XX  
DT 22-OCT-2001 (first entry)  
XX  
DE Human polypeptide SEQ ID NO 2926.  
XX  
KW Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;  
KW peripheral nervous system; neuropathy; central nervous system; CNS;  
KW Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;  
KW amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;  
KW chemokinetic; thrombolytic; drug screening; arthritis; inflammation;  
KW leukaemia.  
XX  
OS Homo sapiens.  
XX  
PN WO200153312-A1.  
XX  
PD 26-JUL-2001.  
XX  
PF 26-DEC-2000; 2000WO-US34263.  
XX  
PR 21-JAN-2000; 2000US-0488725.  
PR 25-APR-2000; 2000US-0552317.  
PR 09-JUL-2000; 2000US-0598042.  
PR 19-JUL-2000; 2000US-0620312.  
PR 03-AUG-2000; 2000US-0653450.  
PR 14-SEP-2000; 2000US-0662191.  
PR 19-OCT-2000; 2000US-0693036.  
PR 29-NOV-2000; 2000US-0727344.  
XX  
PA (HYSE-) HYSEQ INC.  
XX  
PI Tang YT, Liu C, Asundi V, Chen R, Ma Y, Qian XB, Ren F, Wang D;  
PI Wang J, Wang Z, Wehrman T, Xu C, Xue AJ, Yang Y, Zhang J;  
PI Zhao QA, Zhou P, Goodrich R, Drmanac RT;  
XX  
DR WPI; 2001-442253/47.  
DR N-PSDB; AAI58937.  
XX  
PT Novel nucleic acids and polypeptides, useful for treating disorders  
PT such as central nervous system injuries -  
XX  
PS Example 4; SEQ ID NO 2926; 10078pp; English.  
XX  
CC The invention relates to human nucleic acids (AAI57798-AAI61369) and  
CC the encoded polypeptides (AAM38642-AAM42213) with nootropic,  
CC immunosuppressant and cytostatic activity. The polynucleotides are useful  
CC in gene therapy. A composition containing a polypeptide or polynucleotide  
CC of the invention may be used to treat diseases of the peripheral nervous  
CC system, such as peripheral nervous injuries, peripheral neuropathy and  
CC localised neuropathies and central nervous system diseases, such as  
CC Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic  
CC lateral sclerosis, and Shy-Drager Syndrome. Other uses include the  
CC utilisation of the activities such as: Immune system suppression,  
CC Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic  
CC and thrombolytic activity, cancer diagnosis and therapy, drug screening,  
CC assays for receptor activity, arthritis and inflammation, leukaemias and  
CC C.N.S disorders.  
CC Note: The sequence data for this patent did not form part of the printed  
CC specification.  
XX

SQ Sequence 772 AA;

Query Match 54.7%; Score 2227.5; DB 22; Length 772;  
Best Local Similarity 56.6%; Pred. No. 1.2e-180;  
Matches 455; Conservative 101; Mismatches 187; Indels 61; Gaps 14;

```
Qy      1 MRASLLLSVLRPAGPVAVGISLGFTLSLLSVTWV----EEPC-----GPGPPQPGDSELP 51
      || | ||:|||| | : :||| :||| | :| : | :| | || ||
Db      1 MRLSSLALLRPALPLILGLSLGCSLLRVSWIQEGEDPCVEAVGERGGPQNPSDR-- 58

Qy     52 PRGNTNAARRPNSVQPGAEREKPGAGEGAGENWEPRVLPYHPAQPGQAAKKA VRTRYIST 111
      || | | | :||| :||| :||| :||| :||| :||| :||| :|||
Db     59 -----ARLDQS-----DEDFKPRIVPYY-RDPNKPYPKVLRLTRYIQT 94

Qy    112 ELGIRQRLLVAVLTSQTTLPTLGAVNRTLGHRLERVVFLTGARGRRAPPGMAVVTLGEE 171
      || | ||| ||| ||| : || | ||| ||| : ||| : || | ||| ||| : |||
Db     95 ELGSRERLLVAVLTSRATLSTLAVAVNRTVAHHFPRLLYFTGQRGARAPAGMQVVS HGDE 154

Qy    172 RPIGHLHLALRHLLEQHGDDFDWFFLVPDTTYTEAHGLARLTGHLSLASAAHLYLGR PQD 231
      || : ||| | :||| :||| :||| :||| :||| :||| :||| :|||
Db    155 RPAWLMSETLRHLHTHFGADYDWFIMQDDTYVQAPRLAALAGHLSINQ--DLYLGRAEE 212

Qy    232 FIG-GEPTPGRYCHGGFGVLLSRMLLQQLRPHLEGCRNDIVSARPDEWLGRCLDATGVG 290
      ||| || | ||| ||| ||| : ||| :||| :||| :||| :||| :||| :|||
Db    213 FIGAGE--QARYCHGGFGYLLSRSLRLRPHLDGCRGDILSARPDEWLGRCLIDSIGVG 270

Qy    291 CTGDHEGVHYSHLELSPG-EPVQEGDPHFRSALTAHPVRDPVHMYQLHKAFARAE LERTY 349
      | :| | :| :| :| :| :| :| :| :| :| :| :| :| :| :|
Db    271 CVSQHQCQQYRSFELAKNRDPEKEGSSAFLSAFAVHPVSEGTLMYRLHKRFSALELERAY 330

Qy    350 QEIQELQWEIQNTSHLAVDGDRAAAWPVGIPAPSRPASRFEVLRWDYFTEQHAFSCADGS 409
      ||: || :| :| :| :| :| :| :| :| :| :| :| :| :| :|
Db    331 SEIEQLQAQIRNLTVLTPEGEAGLSWPVGLPAPFTPHSRFEVLGWDYFTEQHTFSCADGA 390

Qy    410 PRCPLRGADRADVADVLGTALEELNRRYHPALRLQKQLVNGYRRFDPARGMEYTLDLQL 469
      |: ||: || ||| | | ||| :||| :||| :||| :||| :||| :||| :|||
Db    391 PKCPLQGASRADVGDALETALEQLNRRYQPRLRFQKQRLNLYRRFDPARGMEYTLDLLL 450

Qy    470 EALTPQGGRRPLTRRVQLLRPLSRVEILPVPYVTEASRLTVLLPLAAERDLAPGFLEAF 529
      | :| :| || | ||| ||| ||| :||| :||| :||| :||| :||| :|||
Db    451 ECVTQRGHRRALARRVSLRPLSRVEILPMPYVTEATRVQLVLP LLVAEAAAAPAFLEAF 510

Qy    530 ATAALPGDAAAALTLLLLYEPRQAQRVAHADVFAPVKAHVAELERRFPGARVPWLSVQT 589
      | ||| : | ||| :||| :||| :||| :||| :||| :||| :||| :|||
Db    511 AANVLEPRE-HALLTLLLVYGPREGGRGA-PDPFLGVKAAAELERRYPGTRLAWLAVRA 568

Qy    590 AAPSPRLRLMDLLSKKHPLDTLFLLAGPDTVLT P DFLNRCRMHAISGWQAFFPMHFQAFHP 649
      ||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :|||
Db    569 EAPSQVRLMDVVSKKHPVDTLFFLT TVWTRPGPEVLNRCRMNAISGWQAFFPVHFQEFNP 628

Qy    650 GVAPPQG-PGPPELGRDT-----GRFD RQAASEACFYNSDYVAARGRLAA 693
      :|| : ||| | | ||| ||| :||| :||| :||| :||| :|||
Db    629 ALSPQRSPPGPPGAGDPDPPSPPGADPSRGAPIGGRFD RQASAEFCFYNADYLAARLAG 688

Qy    694 --ASEQEEELLES LDVYELFLHFSSLHVLRAVEPALLQRYRAQTCSARLSEDL YHRC LQS 751
      | :||| || |:| :||| || |:| ||| |:| :||| :||| :||| :|||
Db    689 ELAQEEEEALEGLEVMDVFLRFSGLHLFRAVEPGLVQKFSLRDCSPRLSEELYHRCRLS 748

Qy    752 VLEGLGSRTQLAMLLFEQE QGNST 775
      |||| | ||| |||| |||
Db    749 NLEGLGGRAQLAMALFEQE QANST 772
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ID   Q9H0F8                PRELIMINARY;          PRT;       522 AA.
AC   Q9H0F8;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DE   Hypothetical protein.
GN   DKFZP434E0423.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=21154917; PubMed=11230166;
RA   Wiemann S., Weil B., Wellenreuther R., Gassenhuber J., Glassl S.,
RA   Ansorge W., Boecher M., Bloecker H., Bauersachs S., Blum H.,
RA   Lauber J., Duesterhoeft A., Beyer A., Koehrer K., Strack N.,
RA   Mewes H.W., Ottenwaelder B., Obermaier B., Tampe J., Heubner D.,
RA   Wambutt R., Korn B., Klein M., Poustka A.;
RT   "Towards a Catalog of Human Genes and Proteins: Sequencing and
RT   Analysis of 500 Novel Complete Protein Coding Human cDNAs.";
RL   Genome Res. 11:422-435(2001).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lymph;
RA   Strausberg R.;
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RA   Strausberg R.;
RL   Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AL136814; CAB66748.1; -.
DR   EMBL; BC013369; AAH13369.1; -.
DR   EMBL; BC021223; AAH21223.1; -.
KW   Hypothetical protein.
SQ   SEQUENCE      522 AA;  58355 MW;  87501CE0A043AE3B CRC64;

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Query Match 67.1%; Score 2732; DB 4; Length 522;  
Best Local Similarity 99.8%; Pred. No. 3e-184;  
Matches 521; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy	254	MLLQQLRPHLEGCRNDIVSARPDEWLGRCILDATGVGCTGDHEGVHYSHLELSPGEPVQE	313
Db	1	MLLQQLRPHLEGCRNDIVSARPDEWLGRCILDATGVGCTGDHEGVHYSHLELSPGEPVQE	60
Qy	314	GDPHFRSALTAHPVRDPVHMYQLHKAFARAEELERTYQEIQELQWEIQNTSHLAVDGDRAA	373
Db	61	GDPHFRSALTAHPVRDPVHMYQLHKAFARAEELERTYQEIQELQWEIQNTSHLAVDGDRAA	120
Qy	374	AWPVGIPAPSRPASRFEVLRWDFTEQHAFSCADGSPRCPLRGADRADVADVLGTALEEL	433
Db	121	AWPVGIPAPSRPASRFEVLRWDFTEQHAFSCADGSPRCPLRGADRADVADVLGTALEEL	180
Qy	434	NRRYHPALRLKQQLVNGYRRFDPARGMEYTLDLQLEALTPQGGRRPLTRRVQLLRPLSR	493
Db	181	NRRYHPALRLKQQLVNGYRRFDPARGMEYTLDLQLEALTPQGGRRPLTRRVQLLRPLSR	240
Qy	494	VEILPVPYVTEASRLTVLLPLAAAERDLAPGFLEAFATAALEPGDAAAALTLLLLYEPRQ	553
Db	241	VEILPVPYVTEASRLTVLLPLAAAERDLAPGFLEAFATAALEPGDAAAALTLLLLYEPRQ	300

Qy	554	AQRVAHADVFAPVKAHVAELERRFPGARVPWLSVQTAAPSPLRLMDLLSKKHPLDTLFL	613
Db	301	AQRVAHADVFAPVKAHVAELERRFPGARVPWLSVQTAAPSPLRLMDLLSKKHPLDTLFL	360
Qy	614	AGPDTVLTDPDFLNRCRMHAISGWQAFFPMHFQAFHPGVAPPQGPGPPPELGRTGRFDRQA	673
Db	361	AGPDTVLTDPDFLNRCRMHAISGWQAFFPMHFQAFHPAVAPPQGPGPPPELGRTGRFDRQA	420
Qy	674	ASEACFYNSDYVAARGRLAAASEEQEELLESLDVYELFLHFSSLHLVLRAVEPALLQRYRA	733
Db	421	ASEACFYNSDYVAARGRLAAASEEQEELLESLDVYELFLHFSSLHLVLRAVEPALLQRYRA	480
Qy	734	QTCSARLSEDLYHRCLQSVLEGLGSRTQLAMLLFEQEQQNST	775
Db	481	QTCSARLSEDLYHRCLQSVLEGLGSRTQLAMLLFEQEQQNST	522